Rate Setting

Tools for Funding Future Infrastructure Projects

IACC Regional Training Event

May 2016

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FCS GROUP
Solutions-Oriented Consulting

CSI Infrastructure Crisis Report

- **Report highlighted a number of issues:**
  - ✓ State and federal funding sources are shrinking
  - ✓ Agencies are not setting aside enough funds to replace aging facilities
  - ✓ Budgets are under serious strain as systems age and costs escalate
  - ✓ <u>Many infrastructure systems rely on revenue sources that are inadequate to meet ongoing capital, as well as operations and maintenance (O&M) needs</u>

2014 Infrastructure Crisis, Sustainable Solutions: The Evergreen State College, Center for sustainable infrastructure

Why Are Rate Studies Important?

- Helps to maintain the long-term health and integrity of the utility system
- Quantifies policies, priorities, and initiatives
- Tells the “true” cost of providing service
- Tracks cost information
- Evaluates equity between customer groups
- Communicates financial decisions and their impact
- Management tool

A Successful Rate Study is…

- **A blend of information and expertise from ALL departments:**
  - Finance
  - Engineering
  - Customer Service
  - Administration

…NOT simply a financial exercise!

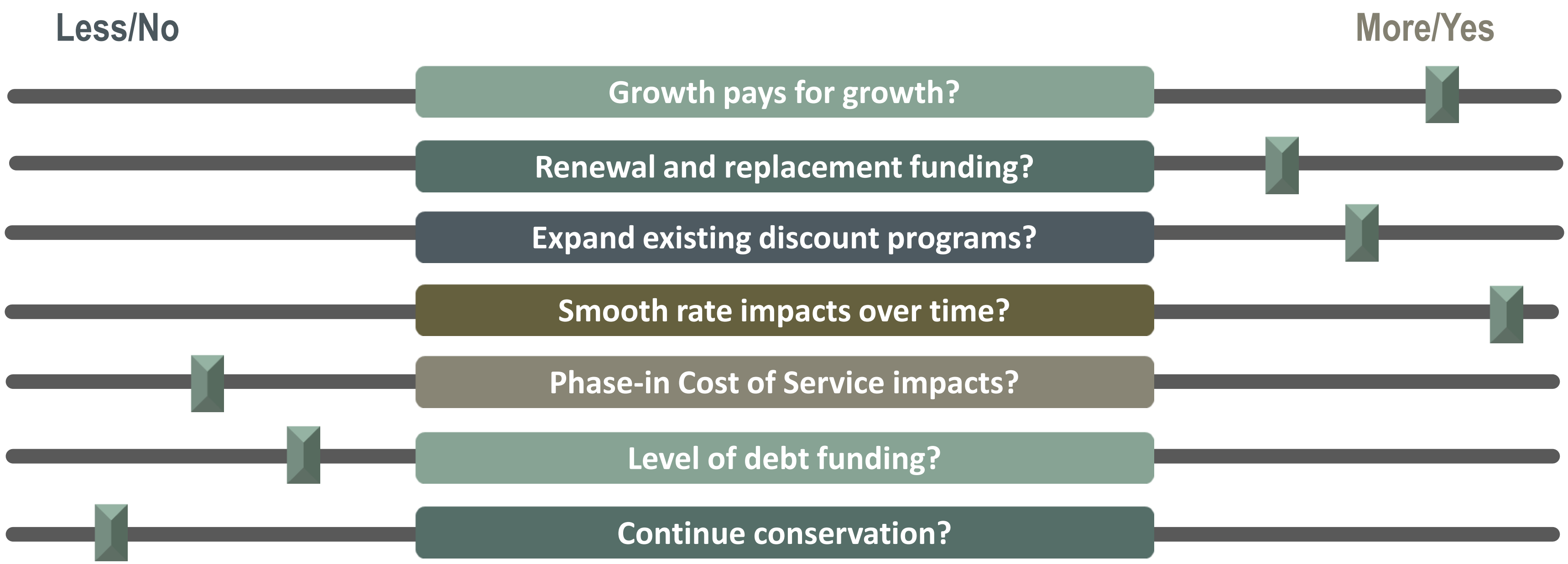
Key Rate Study Steps

- **Your needs and objectives determine the steps to complete**

1. **Sensitivities & Priorities**
   Setting the Stage
2. **Fiscal Policies**
   Establishing Study Foundation
3. **Revenue Needs Assessment**
   Forecasting Costs & Revenues
4. **Cost of Service Analysis**
   Evaluating Customer Equity
5. **Rate Structure Design**
   Collecting the Target Revenue
6. **Public Education**
   Fostering Understanding & Acceptance

Understand Sensitivities And Priorities

- **Understanding priority of management and Board/Council is critical to the overall direction of your plan**
- **Policies, strategies and rate structures can be developed or refined to align with priorities**



Fiscal Policies

- Promote financial stability
- Improve ability to weather financial risk and disruptions
- Foundation for consistent financial/rate decisions
- Can help stabilize rates over time

Documentation of Policies is Ideal!

Example Fiscal Policies

	Purpose	Target
Operating Reserve	Liquidity cushion to accommodate cyclical cash flow fluctuations	Water = 90; Sewer = 45-90 Storm/Solid Waste = 30 Days O&M
Capital Contingency Reserve	To meet emergency repairs, unanticipated capital, and project cost overruns	1% - 2% of Original Cost Asset Values
Capital Replacement Funding	Promote ongoing system integrity through reinvestment in the system.	Annual Depreciation Expense; Annual Depreciation less debt principal
Debt Service Coverage	Compliance with existing debt covenants and maintain credit worthiness for future debt needs.	Target 1.50-1.75; Minimum Requirement 1.25
Rate Setting	Streamline rate approval process	Rates will be adopted for a period of 2 - 6 years as a part of the budget process.
Revenue Sufficiency	Defines components for self-sufficient utility	Rates shall be set to cover O&M costs, debt service, annual capital refurbishment/replacement and reserve fund contributions.

Debt Capacity

- **How much debt can you support?**

Ratio	Formula	Range
Debt to Equity Ratio	Total Debt ÷ Total Net Assets	35%-45% debt in general range
Debt Service Coverage Ratio	(Total Revenue less Total O&M expenses) ÷ debt service (P&I)	1.25 minimum; Target 1.70 or greater ideal
Debt as % of Operating Revenue	Annual Debt Service ÷ Total Operating Revenue	15% - 35%; median 25%

Example Debt Service Coverage Calculation					
A	Total Revenue*	$ 2,500,000	$ 2,625,000	$ 3,000,000	$ 5,000,000
B	Operating Expenses	$ 2,000,000	$ 2,000,000	$ 2,000,000	$ 2,000,000
C =(A -B)	Net Revenue or Available for Capital	$ 500,000	$ 625,000	$ 1,000,000	$ 3,000,000
D	Revenue Bond Debt Service	$ 500,000	$ 500,000	$ 500,000	$ 500,000
C/D	**Debt Service Coverage**	**1.00**	**1.25**	**2.00**	**6.00**
Debt Service as % of Operating Revenue					
D/A	**Operating Expenses**	**20%**	**19%**	**17%**	**10%**

* does not include connection charges or beginning fund balance

* may excludes pledge of City tax collections

Role of a Revenue Requirement Analysis

- Multi-year financial plan
- Determines the amount of revenue necessary to meet all utility financial obligations
- Evaluates sufficiency of current rates on a stand-alone basis
- Develops annual rate implementation strategy

How Much Revenue is Needed?

Forecast of O&M Costs

+

Planned Capital Costs

+

Existing & New Debt Service

+

Fiscal Policy Achievement

Annual Revenue Needs

Rate Study Components

	KEY RATE COMPONENTS
	Operating & Maintenance
+	Debt Service
+	Rate Funded Capital
=	Revenue Requirement
-	Miscellaneous Revenue
=	Revenue from Rates

	FUND BALANCE
	Beginning Balance
-	Target Balance (days O&M)
=	Additional Funding Available for Capital

Revenue Considerations

- **Forecast of revenue generated by customer class**
  - Should consider 3-5 year historical revenue trends
- **Include revenue from other operating fees/charges**
- **Do not include beginning balance**
  - One time revenue that can mask rate evaluation

Two Key Cost Areas

Operations & Maintenance	Capital Infrastructure
◆ Regular, ongoing activities ◆ Highly time & schedule sensitive ◆ Predicable, steady spending patterns ◆ Predictable, regular funding source	◆ Large, discrete projects ◆ Limited time, schedule sensitivity ◆ Long-term in nature ◆ Inconsistent, varied spending patterns ◆ Inconsistent, varied funding sources

Separating operating and capital activities facilitates more accurate forecasting

Operating Cost Considerations

- Historical cost review
- Inflation factors, CPI, CCI, labor contracts
- Strategic program initiatives
- Additional or enhanced needs (staffing, regulatory requirements)
- Increasing costs (purchases, materials, supplies, electricity)
- Indirect costs (overhead allocation up to date?)
- Taxes (state excise, city utility)
  - Periodically review state excise tax calculations

Capital Costs

- **Basis for costs is comprehensive plan or internally developed CIP**
  - Cost Escalated? What is year of construction?
- **Capital program should identify timing, cost, funding and scope of project**
- **Funding:**
  - Rate funding
  - Debt (bonds/loans)
  - Connection charge (updated, have one?)
  - Contributions/donations
- **Should identify priority/ranking (if cuts required)**

Lack of Infrastructure Funding

- **ASCE Report card on America's infrastructure graded water/sewer a "D"**
- **Current cost of doing business is to provide something for future R&R of the system**
- **Risk of not funding infrastructure**
  - Equity (net assets) will erode
  - Debt capacity may not be available when needed
  - Rate spikes will prevail
  - Level of service delivered will decline

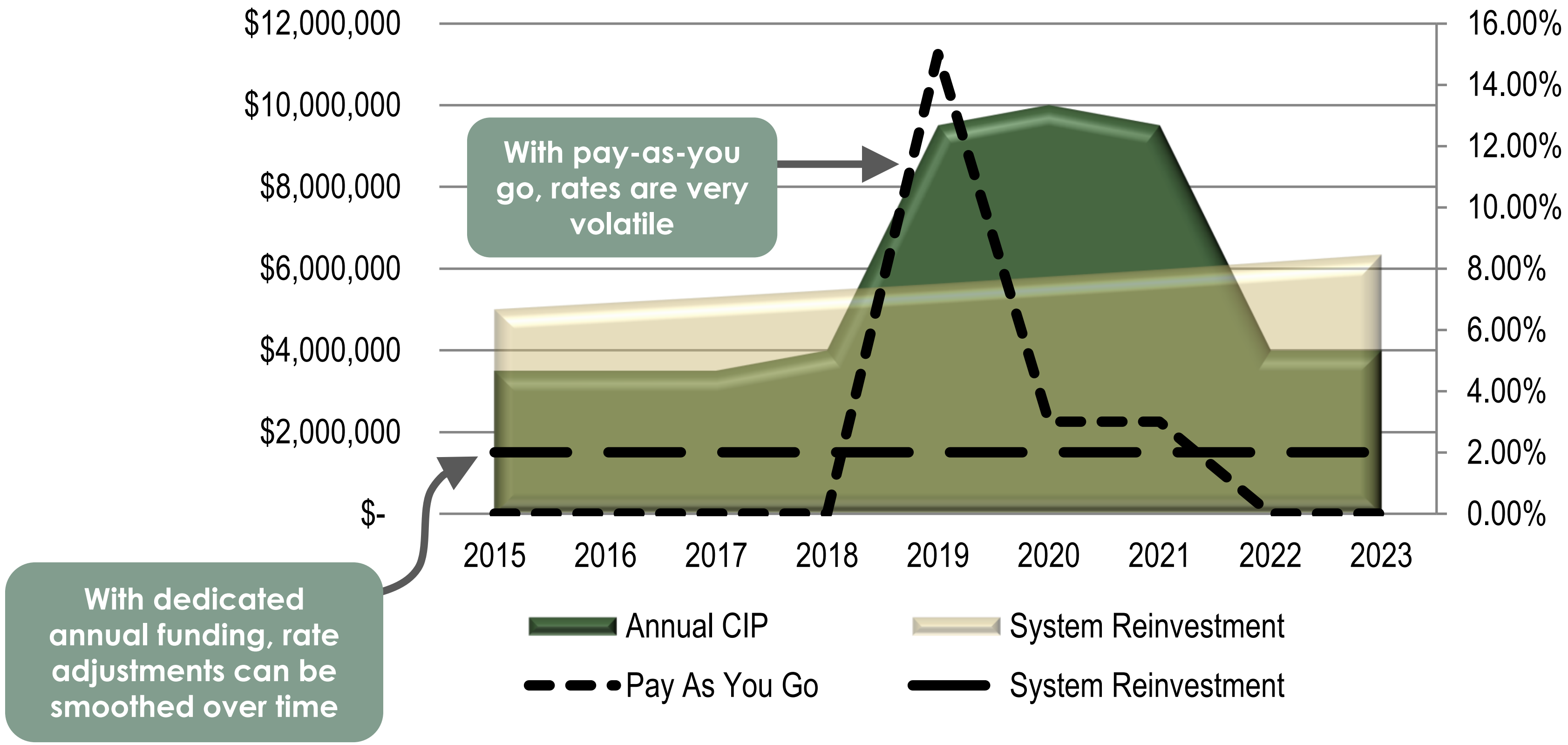
American Society of Civil Engineers (ASCE)

Infrastructure Funding

- **How much should be funded?**
- **Asset management plan ideal**
- **Alternative annual funding targets**
  - Annual depreciation
  - Annual depreciation less debt service principal
  - Replacement cost
- **Funding is a consistent cash amount from current rate revenue**
  - Pays for current R&R projects or
  - Saved in fund to pay for future capital projects

System Reinvestment Funding

- System reinvestment funding recognizes annual CIP spending may not be uniform



Example - Capital Project Priority

Priority	Total Project Cost
Priority 1	$6,157,000
Priority 2	$951,000
Priority 3	$5,905,000
Priority 4	$5,133,000
Priority 5	$2,000,000
Total	**$20,146,000**

Priority Ranking Definitions:

1 = Essential for system reliability to avoid prolonged outages.

2 = Allows system recovery in relatively short time spans with minimal effect on customers.

3 = Required to meet future growth and to provide redundancy.

4 = Replacement of outdated equipment prior to failure and system improvements that need to be done but can be postponed without major risk.

5 = Contingency projects that depend on equipment status following further engineering inspection in the next four years.

Capital Funding Considerations

- **Understanding nature of capital projects can determine if funding should be cash, debt or a combination**
  - Debt financing spreads costs between existing and future ratepayers
  - Existing customers should pay for assets currently in use - appropriate to rate (cash) fund
- **How will funding deficiency be met?**
  - No cost resources first – grants/developer contributions
  - Existing revenue – connection/facility charges, rate funded capital, other transfer
  - Existing resources – cash balances
  - “Preferred” debt – low interest loans
  - Traditional debt – revenue bonds

Capital Funding Philosophy

- **Cash (pay-as-you-go)- Higher Near Term Rates**
  - Existing customers pay 100% of initial costs
- **Debt Financing – Lowest Near-Term Rates Higher Average Long-Term Rates**
  - Mitigates immediate rate impacts of costly capital
  - More closely matches costs to useful life of asset
  - Spreads costs between existing and future ratepayers
  - Debt capacity may be an issue
- **Hybrid**
  - Define a reasonable basis for cash/rate funding (R&R projects)
  - Evaluate need for debt (large, long life projects)
  - Aligns funding with nature of capital project

Capital Funding Plan

Summary of Expenditures	2010	2011	2012	2013	2014	2015	TOTAL
CAPITAL PROJECTS							
Upgrades & Expansions	$ 2,563,392	$ 1,777,285	$ 584,929	$ 3,406,628	$ 3,441,668	$ 579,010	$ 12,352,912
Repairs and Replacements	4,930,488	2,913,398	4,466,754	1,894,628	2,122,146	3,695,107	20,022,521
TOTAL CAPITAL EXPENDITURES	**$ 7,493,880**	**$ 4,690,683**	**$ 5,051,683**	**$ 5,301,256**	**$ 5,563,814**	**$ 4,274,117**	**$ 32,375,433**
CAPITAL RESOURCES							
Rate Funded Capital	$ 2,525,803	$ 2,675,680	$ 2,825,699	$ 3,234,215	$ 3,370,822	$ 3,728,008	$ 18,360,228
LFC/GFC	500,000	500,000	500,000	500,000	500,000	238,092	2,738,092
PWTF Proceeds	2,477,868	-	-	-	-	-	2,477,868
Interest	211,355	392,631	348,707	395,080	351,434	308,018	2,007,225
Capital Fund Balance	1,778,854	1,122,372	1,377,277	1,171,961	1,341,557	-	6,792,020
TOTAL CAPITAL RESOURCES	**$ 7,493,880**	**$ 4,690,683**	**$ 5,051,683**	**$ 5,301,256**	**$ 5,563,814**	**$ 4,274,117**	**$ 32,375,433**

- **Repairs and replacements represent 62% of total capital, upgrade/expansion 38%**
- **Information offers range of where funding should come from:**
  - 57% of this capital plan funded from annual rate revenue contributions

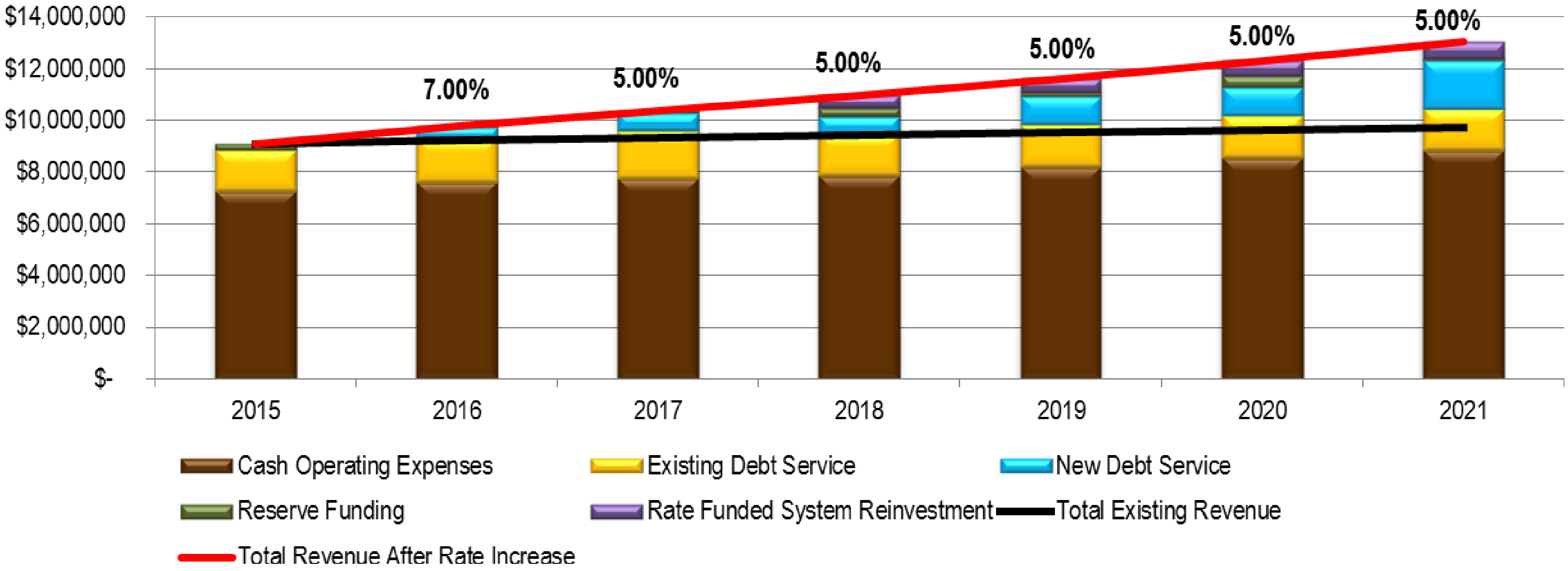
Capital Funding Impacts

	KEY RATE COMPONENTS
	Operating & Maintenance
+	Debt Service
+	Rate Funded Capital
=	Revenue Requirement
-	Miscellaneous Revenue
=	Revenue from Rates

	CAPITAL FUNDING
	Total Capital Projects
-	Contributions (grant/developer)
-	Development Charges (SDC/GFC)
-	Rate Funded Capital
-	Cash Reserves
=	Debt Funding (loans/bonds)

	FUND BALANCE
	Beginning Balance
-	Target Balance (days O&M)
=	Available for Capital

Revenue Requirement = Establishing Overall Revenue Needs



- Identifies total financial obligations
- Evaluates sufficiency of existing rates
- Develops annual rate strategy

Cost of Service = Equity Evaluation

- **Cost of service identifies how costs will be equitably distributed among customer classes**
- **Cost allocations are based on**
  – Industry standard methodologies
  – Unique usage characteristics (use and demands)
  – Unique facility requirements (planning and design criteria)

Class	Existing 2017 Revenue	COSA 2017 Revenue	$ Difference	% Difference
Residential	$ 5,635,687	$ 5,818,285	$ 182,598	**3.24%**
Multifamily	1,359,847	1,009,157	(350,690)	**-25.79%**
Commercial	2,548,590	2,716,682	168,092	**6.60%**
Total	**$ 9,544,124**	**$ 9,544,124**	**$ 0**	**0.00%**

Rate Design = Revenue Collection

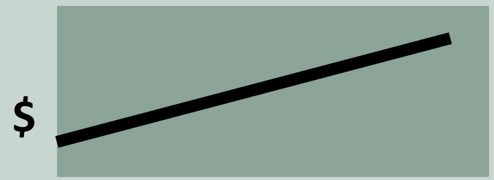
- **Creation of rate structures that recover the target level of revenue**
- **Primary communication with customers**
- **Composed of fixed and/or variable charges**
- **Considerations:**
  - Equity of rates
  - Complexity of rates (understandable & implementable)
  - Rate Impacts
  - Revenue stability and predictability
  - Social objectives (affordability, economic development, conservation, etc.)

Types of Rate Structures

Flat Rate

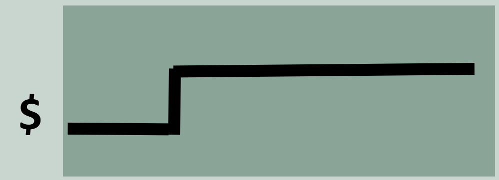
Fixed Charge $40/mo.

Uniform Rate



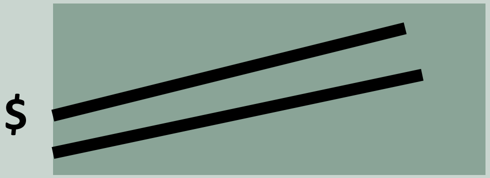
Fixed Charge $10/mo.
Volume Charge $0.60/ccf

Allowance Rate



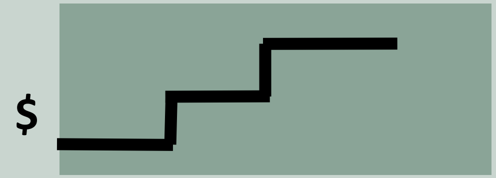
Fixed Charge $12/mo.
0 - 10 ccf $0.00/ccf
Use >10 ccf $1.00/ccf

Seasonal Rate



Fixed Charge $10/mo.
Winter Charge $1.00/ccf
Summer Charge $1.50/ccf

Inclining/Tiered Rate



Fixed Charge $10/mo.

0-10 ccf $0.50 / ccf
10-20 ccf $0.75 / ccf
> 20 ccf $1.00 / ccf

- Fixed charges for water utilities are typically charged by meter size
- Flat rates are common for Sewer and storm rates
- Sewer moving to volume based rates

What Are Your Goals & Objectives?

- Revenue stability
- Reduce overall average use
- Reduce demands during peak use periods
- Affordable “core” water service
- Get conservation rate concept in place
- Target top 10-15% largest users

Do Rate Structures Align with Objectives?

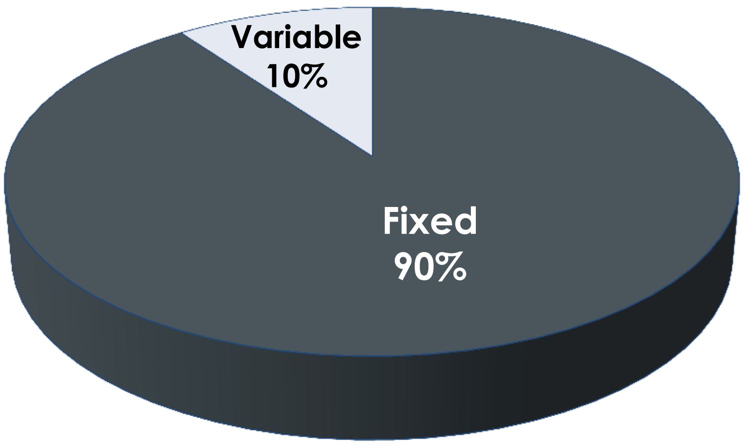
- **Rate structure prioritization**
- **Understanding priority of management & Board/Council is critical to the overall direction of your rate setting process**
- **Rate Structures can be developed or refined to align with priorities**

Objective	Goal(s)	Ranking
Generate Stable Revenue	Reduce revenue volatility	1
Mitigate Impacts to Customers	Recover costs equitably from customers without adverse impacts	2
Provide Affordable "Core" Water Service	Keep costs low for basic "lifeline" users	3
Promote Water Conservation	Reduce overall/ peak water demands	4
Facilitate Administrative Efficiency	Retain/improve ease of administration/ compatibility with billing system	5

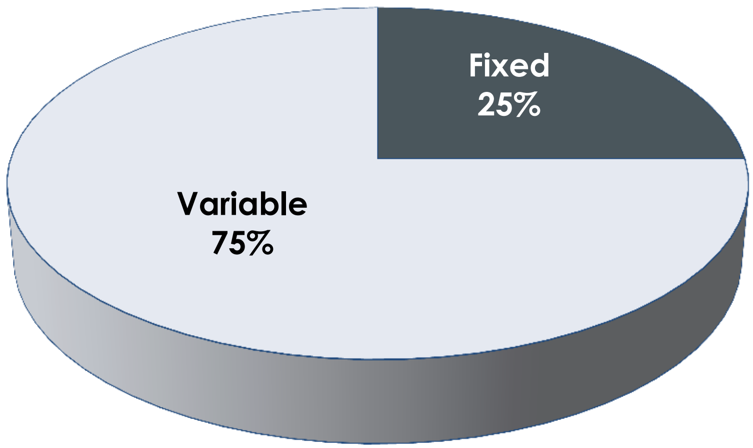
Rate Design

- Create rate structures that recover the target level of revenue
- Primary communication with customers
- Composed of fixed and/or variable charges
- Revenue stability

Sample Breakdown of Costs



Sample Breakdown of Revenues



Alternative Rate Considerations

Bi-Mo. General Rates	2013	2014	2015	2016	2017	2018
Fixed Charge	$ 21.63	$ 5.76	$ 5.85	$ 5.93	$ 6.02	$ 6.11
B1 - (0-8)	-	-	-	-	-	-
B2 - (9-20)	1.11	1.22	1.24	1.26	1.28	1.30
B3 - (21+)	1.51	1.66	1.69	1.71	1.74	1.76
Bi-Monthly R&R Fee	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
5/8"	-	22.00	24.00	26.00	28.00	30.00
1"	-	24.20	26.40	28.60	30.80	33.00
1.5"	-	30.80	33.60	36.40	39.20	42.00
2"	-	39.60	43.20	46.80	50.40	54.00
3"	-	63.80	69.60	75.40	81.20	87.00
4"	-	242.00	264.00	286.00	308.00	330.00
6"	-	308.00	336.00	364.00	392.00	420.00

Surcharge pays for existing and new debt service to fund planned capital projects

Fixed additional charge to pay for Pipe Replacement Program

Single-Family Residential Average Monthly Bill	Existing	2013	2014	2015	2016	2017	2018
O&M Rate	$24.87	$28.60	$30.32	$31.23	$32.16	$32.81	$33.46
Capital Surcharge	0.00	5.00	12.00	18.00	18.00	18.00	24.00
Total Bill	$29.84	$33.60	$42.32	$49.23	$50.16	$50.81	$57.46

Alternative Rate Considerations (cont.)

- **Indexed Rates**
  - Rate study establishes initial baseline
  - Rates increased annually by index until next study (3-5 years)
  - Benefit: rates do not get too far behind cost curve

> Effective January 1st of each year, beginning on January 1, 20xx, the water rates listed in xxMC xx.xx.xxx shall be adjusted by the annual change in the most recent XX Consumer Price Index (Urban Consumers) published by the U.S. Department of Labor

Public Education/Communication

- **Greater public scrutiny requires public engagement, education and transparency**
- **Multiple options available**
  - Dedicated website
  - Open house
  - Rate committee
  - Radio/television interviews
  - Bill calculators
  - Frequently asked questions
  - Newsletters
  - Bill stuffers/notices

NEWS RELEASE

LAKEWOOD WATER DISTRICT ANNOUNCES 50-YEAR

PIPE REPLACEMENT AND REHABILITATION PLAN

Supporting their customer-focused approach of "Our Water…Our Community…Our Future" Lakewood Water District has announced plans to replace 180 miles of aging asbestos cement water pipes over the next fifty years. These pipes are currently 50-70

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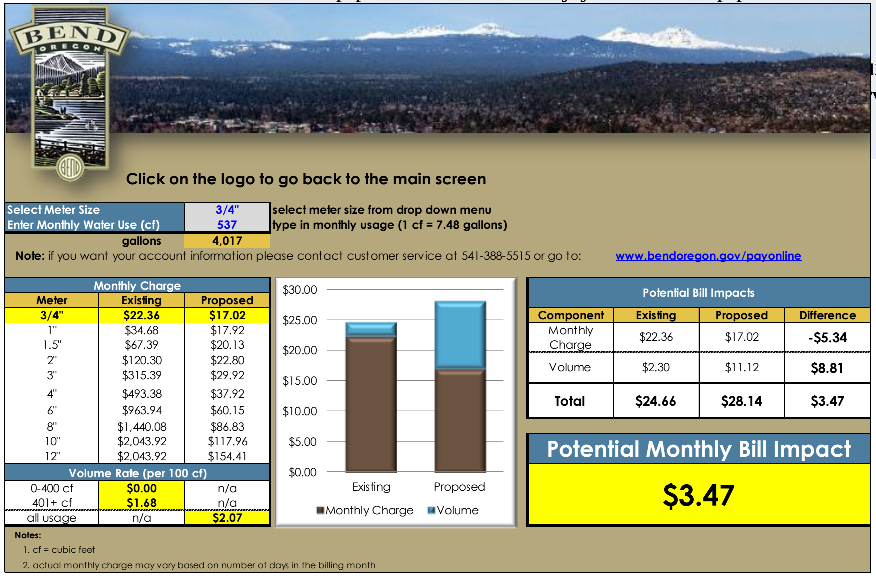

Take Away

1. Evaluate if ongoing revenue is meeting annual revenue requirements
2. Identify or establish fiscal policies
3. Review operating and capital fund balances for sufficiency
4. Do rates support consistent level of annual capital funding?
5. Calculate % of revenue coming from fixed charges and variable charges

Examples

General Rate Review Approach

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Beginning Balance	$ 5,264,000	$ 4,760,000	$ 4,486,000	$ 3,024,000	$ 1,109,000	$ (34,000)
Rate Revenues Under Existing Rates	4,983,000	4,997,000	5,012,000	5,026,000	5,040,000	5,055,000
Non-Rate Revenues	492,000	508,000	446,000	399,000	412,000	427,000
Total Revenues	**$ 10,739,000**	**$ 10,265,000**	**$ 9,944,000**	**$ 8,449,000**	**$ 6,561,000**	**$ 5,448,000**
Expenses						
Cash Operating Expenses	$ 4,651,000	$ 4,772,000	$ 4,897,000	$ 5,026,000	$ 5,159,000	$ 5,296,000
Existing Debt Service	967,000	907,000	887,000	884,000	880,000	846,000
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	361,000	100,000	1,136,000	1,430,000	556,000	610,000
Total Expenses	**$ 5,979,000**	**$ 5,779,000**	**$ 6,920,000**	**$ 7,340,000**	**$ 6,595,000**	**$ 6,752,000**
Net Surplus (Deficiency)	**$ 4,760,000**	**$ 4,486,000**	**$ 3,024,000**	**$ 1,109,000**	**$ (34,000)**	**$ (1,304,000)**
Additions to Meet Coverage	-	-	-	-	-	-
Total Surplus (Deficiency)	**$ 4,760,000**	**$ 4,486,000**	**$ 3,024,000**	**$ 1,109,000**	**$ (34,000)**	**$ (1,304,000)**
% Rate Increase Required	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.67%**	**25.80%**

General Rate Review Observations

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Beginning Balance	$ 5,264,000	$ 4,760,000	$ 4,486,000	$ 3,024,000	$ 1,109,000	$ (34,000)
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Total Expenses	**$ 5,979,000**	**$ 5,779,000**	**$ 6,920,000**	**$ 7,340,000**	**$ 6,595,000**	**$ 6,752,000**
Net Surplus (Deficiency)	**$ 4,760,000**	**$ 4,486,000**	**$ 3,024,000**	**$ 1,109,000**	**$ (34,000)**	**$ (1,304,000)**
Additions to Meet Coverage	-	-	-	-	-	-
Total Surplus (Deficiency)	**$ 4,760,000**	**$ 4,486,000**	**$ 3,024,000**	**$ 1,109,000**	**$ (34,000)**	**$ (1,304,000)**
% Rate Increase Required	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.67%**	**25.80%**

- **Including beginning fund balance in rate evaluation can mask needed rate revenue**
- **Example shows no rate increase needed until 2018 when fund balance depleted**

Revised Rate Assessment
(self supporting rates concept)

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Rate Revenues Under Existing Rates	$ 4,983,000	$ 4,997,000	$ 5,012,000	$ 5,026,000	$ 5,040,000	$ 5,055,000
Non-Rate Revenues	492,000	509,000	447,000	403,000	418,000	433,000
Total Revenues	**$ 5,475,000**	**$ 5,506,000**	**$ 5,459,000**	**$ 5,429,000**	**$ 5,458,000**	**$ 5,488,000**
Expenses						
Cash Operating Expenses	$ 4,657,000	$ 4,778,000	$ 4,902,000	$ 5,031,000	$ 5,164,000	$ 5,302,000
Existing Debt Service	967,000	907,000	887,000	884,000	880,000	846,000
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	-	-	-	-	-	-
Total Expenses	**$ 5,624,000**	**$ 5,685,000**	**$ 5,789,000**	**$ 5,915,000**	**$ 6,044,000**	**$ 6,148,000**
Total Surplus (Deficiency)	**$ (149,000)**	**$ (179,000)**	**$ (330,000)**	**$ (486,000)**	**$ (586,000)**	**$ (660,000)**
% of Rate Revenue	**2.99%**	**3.58%**	**6.58%**	**9.67%**	**11.63%**	**13.06%**

When recurring revenue evaluated alone – rate increases needed

- **Fund balance is a one time revenue source – should not be included in initial rate evaluation**
  - Can be used to phase-in rate increases
- **Evaluate rate sufficiency to cover existing operating needs first (O&M, taxes, existing debt service)**
- **Now add capital…..**

Rate Assessment w/Capital
(Pay as you go)

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Rate Revenues Under Existing Rates	$ 4,983,000	$ 4,997,000	$ 5,012,000	$ 5,026,000	$ 5,040,000	$ 5,055,000
Non-Rate Revenues	492,000	507,000	445,000	397,000	412,000	427,000
Total Revenues	**$ 5,475,000**	**$ 5,504,000**	**$ 5,457,000**	**$ 5,423,000**	**$ 5,452,000**	**$ 5,482,000**
Expenses						
Cash Operating Expenses	$ 4,651,000	$ 4,772,000	$ 4,897,000	$ 5,026,000	$ 5,159,000	$ 5,296,000
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New Debt Service	-	-	-	-	-	-
Rate Funded Capital	361,000	100,000	1,136,000	1,430,000	556,000	610,000
Total Expenses	**$ 5,979,000**	**$ 5,779,000**	**$ 6,920,000**	**$ 7,340,000**	**$ 6,595,000**	**$ 6,752,000**
Total Surplus (Deficiency)	**$ (504,000)**	**$ (275,000)**	**$ (1,463,000)**	**$ (1,917,000)**	**$ (1,143,000)**	**$ (1,270,000)**
% of Rate Revenue	**10.11%**	**5.50%**	**29.19%**	**38.14%**	**22.68%**	**25.12%**

Rate funding capital can cause peaks and valleys in rates

- **Some entities want to cash/rate fund needs – no debt**
- **Fund balances should take capital funding volatility not rates**
- **Capital funding should be smoothed annually with other funding sources available**

General Rate Review (additional observations)

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Beginning Balance	$ 5,264,000	$ 4,760,000	$ 4,486,000	$ 3,024,000	$ 1,109,000	$ (34,000)
Rate Revenues Under Existing Rates	4,983,000	4,997,000	5,012,000	5,026,000	5,040,000	5,055,000
Non-Rate Revenues	492,000	508,000	446,000	399,000	412,000	427,000
Total Revenues	**$ 10,739,000**	**$ 10,265,000**	**$ 9,944,000**	**$ 8,449,000**	**$ 6,561,000**	**$ 5,448,000**
Expenses						
Cash Operating Expenses	$ 4,651,000	$ 4,772,000	$ 4,897,000	$ 5,026,000	$ 5,159,000	$ 5,296,000
Existing Debt Service	967,000	907,000	887,000	884,000	880,000	846,000
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	361,000	100,000	1,136,000	1,430,000	556,000	610,000
Total Expenses	**$ 5,979,000**	**$ 5,779,000**	**$ 6,920,000**	**$ 7,340,000**	**$ 6,595,000**	**$ 6,752,000**
Net Surplus (Deficiency)	**$ 4,760,000**	**$ 4,486,000**	**$ 3,024,000**	**$ 1,109,000**	**$ (34,000)**	**$ (1,304,000)**
Additions to Meet Coverage	-	-	-	-	-	-
Total Surplus (Deficiency)	**$ 4,760,000**	**$ 4,486,000**	**$ 3,024,000**	**$ 1,109,000**	**$ (34,000)**	**$ (1,304,000)**
% Rate Increase Required	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.67%**	**25.80%**

Capital needs not consistent year to year

Fund balance depleted

- **Rate increases needed in 2018/2019**
- **Wait until 2018/2019 or begin proactively funding needs slowly now?**

100% Depreciation Funding

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Rate Revenues Under Existing Rates	$ 4,983,000	$ 4,997,000	$ 5,012,000	$ 5,026,000	$ 5,040,000	$ 5,055,000
Non-Rate Revenues	492,000	505,000	441,000	397,000	412,000	427,000
Total Revenues	**$ 5,475,000**	**$ 5,502,000**	**$ 5,453,000**	**$ 5,423,000**	**$ 5,452,000**	**$ 5,482,000**
Expenses						
Cash Operating Expenses	$ 4,657,000	$ 4,778,000	$ 4,902,000	$ 5,031,000	$ 5,164,000	$ 5,302,000
Existing Debt Service	967,000	907,000	887,000	884,000	880,000	846,000
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	1,396,000	1,398,000	1,421,000	1,449,000	1,460,000	1,473,000
Total Expenses	**$ 7,020,000**	**$ 7,083,000**	**$ 7,210,000**	**$ 7,364,000**	**$ 7,504,000**	**$ 7,621,000**
Total Surplus (Deficiency)	**$ (1,545,000)**	**$ (1,581,000)**	**$ (1,757,000)**	**$ (1,941,000)**	**$ (2,052,000)**	**$ (2,139,000)**
% of Rate Revenue	**31.01%**	**31.64%**	**35.06%**	**38.62%**	**40.71%**	**42.31%**

- **Rate funded capital <u>equal to depreciation expense</u>**
  - Reduces need for debt
  - Accumulates cash for future capital needs
  - May result in large rate impacts

Depreciation Funding – Phase In

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Rate Revenues Under Existing Rates	$ 4,983,000	$ 4,997,000	$ 5,012,000	$ 5,026,000	$ 5,040,000	$ 5,055,000
Non-Rate Revenues	492,000	509,000	447,000	403,000	418,000	433,000
Total Revenues	**$ 5,475,000**	**$ 5,506,000**	**$ 5,459,000**	**$ 5,429,000**	**$ 5,458,000**	**$ 5,488,000**
Expenses						
Cash Operating Expenses	$ 4,657,000	$ 4,778,000	$ 4,902,000	$ 5,031,000	$ 5,164,000	$ 5,302,000
Existing Debt Service	967,000	907,000	887,000	884,000	880,000	846,000
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	250,000	500,000	750,000	1,000,000	1,250,000	1,500,000
Total Expenses	**$ 5,874,000**	**$ 6,185,000**	**$ 6,539,000**	**$ 6,915,000**	**$ 7,294,000**	**$ 7,648,000**
Total Surplus (Deficiency)	**$ (399,000)**	**$ (679,000)**	**$ (1,080,000)**	**$ (1,486,000)**	**$ (1,836,000)**	**$ (2,160,000)**
% of Rate Revenue	**8.01%**	**13.59%**	**21.55%**	**29.57%**	**36.43%**	**42.73%**

- **Rate funded capital Phase-in to depreciation over time**
  - Reduces need for debt
  - Accumulates cash for future capital needs
  - Moderates rate impacts

Fund Balance Assessment

Fund Balance	2014	2015	2016	2017	2018	2019
Beginning Balance	$ 3,000,000	$ 2,667,000	$ 2,563,168	$ 1,272,075	$ (473,244)	$ (1,448,744)
plus: Net Cash Flow	(149,000)	(180,000)	(331,000)	(488,000)	(589,000)	(665,000)
plus: Rate Funded Capital	-	-	-	-	-	-
plus: System Development Charges	169,500	169,500	169,500	169,500	169,500	169,500
plus: Revenue Bond Proceeds	-	-	-	-	-	-
plus: PWTF Loans	-	-	-	-	-	-
plus: Interest Earnings	7,500	6,668	6,408	3,180	-	-
Total Funding Sources	**$ 3,028,000**	**$ 2,663,168**	**$ 2,408,075**	**$ 956,756**	**$ (892,744)**	**$ (1,944,244)**
less: Capital Expenditures	(361,000)	(100,000)	(1,136,000)	(1,430,000)	(556,000)	(610,000)
Ending Capital Fund Balance	**$ 2,667,000**	**$ 2,563,168**	**$ 1,272,075**	**$ (473,244)**	**$ (1,448,744)**	**$ (2,554,244)**
Minimum Target Balance (90 days O&M)	*$ 1,148,301*	*$ 1,178,137*	*$ 1,208,712*	*$ 1,240,521*	*$ 1,273,315*	*$ 1,307,342*
Days	209	257	130	(35)	(145)	(263)

Rate deficiency

Capital costs

Fund balances depleted and below targets, other funding sources needed

- **Separate but related to rate revenue evaluation**
- **Fund must cover any annual rate deficiency and capital needs**
- **Separate operating and capital fund balance ideal**
- **Include all funding sources available**
- **Are fund balance targets met?**

Debt Funding

Fund Balance	2014	2015	2016	2017	2018	2019
Beginning Balance	$ 3,000,000	$ 2,667,000	$ 2,563,168	$ 1,272,075	$ 3,376,756	$ 2,409,697
plus: Net Cash Flow	(149,000)	(180,000)	(331,000)	(488,000)	(589,000)	(665,000)
plus: Rate Funded Capital	-	-	-	-	-	-
plus: System Development Charges	169,500	169,500	169,500	169,500	169,500	169,500
plus: Revenue Bond Proceeds	-	-	-	3,850,000	-	-
plus: PWTF Loans	-	-	-	-	-	-
plus: Interest Earnings	7,500	6,668	6,408	3,180	8,442	6,024
Total Funding Sources	**$ 3,028,000**	**$ 2,663,168**	**$ 2,408,075**	**$ 4,806,756**	**$ 2,965,697**	**$ 1,920,222**
less: Capital Expenditures	(361,000)	(100,000)	(1,136,000)	(1,430,000)	(556,000)	(610,000)
Ending Fund Balance	**$ 2,667,000**	**$ 2,563,168**	**$ 1,272,075**	**$ 3,376,756**	**$ 2,409,697**	**$ 1,310,222**
Minimum Target Balance (90 days O&M)	*$ 1,148,301*	*$ 1,178,137*	*$ 1,208,712*	*$ 1,240,521*	*$ 1,273,315*	*$ 1,307,342*
Days	*209*	*196*	*95*	*245*	*170*	*90*

New debt needed; Results in new debt service payment; coverage requirements

Revenue Requirement	2014	2015	2016	2017	2018	2019
Revenues						
Rate Revenues Under Existing Rates	$ 4,983,000	$ 4,997,000	$ 5,012,000	$ 5,026,000	$ 5,040,000	$ 5,055,000
Non-Rate Revenues	492,000	509,000	447,000	403,000	418,000	433,000
Total Revenues	**$ 5,475,000**	**$ 5,506,000**	**$ 5,459,000**	**$ 5,429,000**	**$ 5,458,000**	**$ 5,488,000**
Expenses						
Cash Operating Expenses	$ 4,657,000	$ 4,778,000	$ 4,902,000	$ 5,031,000	$ 5,164,000	$ 5,302,000
Existing Debt Service	967,000	907,000	887,000	884,000	880,000	846,000
New Debt Service	-	-	-	326,000	326,000	326,000
Rate Funded Capital	-	-	-	-	-	-
Total Expenses	**$ 5,624,000**	**$ 5,685,000**	**$ 5,789,000**	**$ 6,241,000**	**$ 6,370,000**	**$ 6,474,000**
Total Surplus (Deficiency)	**$ (149,000)**	**$ (179,000)**	**$ (330,000)**	**$ (812,000)**	**$ (912,000)**	**$ (986,000)**
% of Rate Revenue	**2.99%**	**3.58%**	**6.58%**	**16.16%**	**18.10%**	**19.51%**

Summary

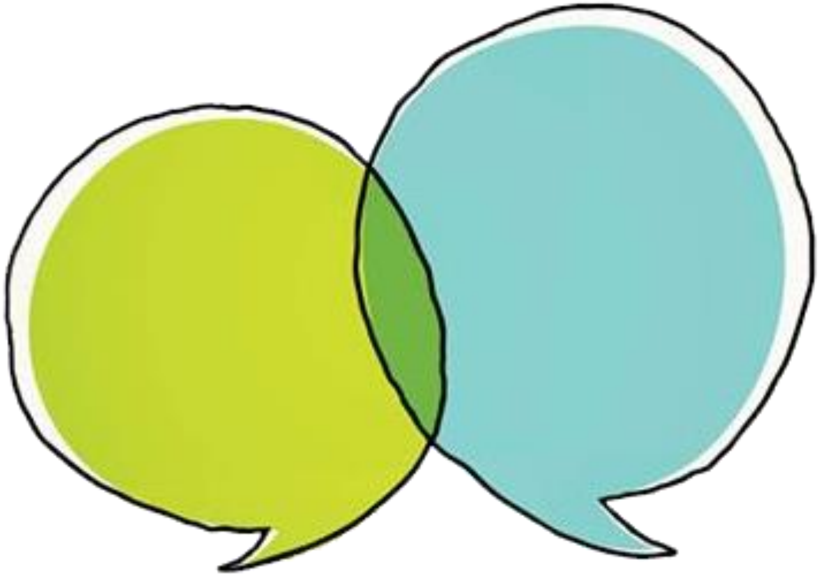
- Understand your sensitivities and priorities
- Review rates every year as part of the budget process
- It is never to early to start funding infrastructure replacement
- A multi-year plan will help identify future needs
- Set up appropriate reserves to help weather unforeseen events
- Transparency and communication are key!

Where do you want to go?

How are you going to get there?

What will it cost?

Questions and Discussion



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